This Page Is Inserted by IFW Operations and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES INVENTOR(S): SHENGGAO LIU ET AL. ATTORNEY'S DOCKET NO: 005950-844

SHEET 1 of 26

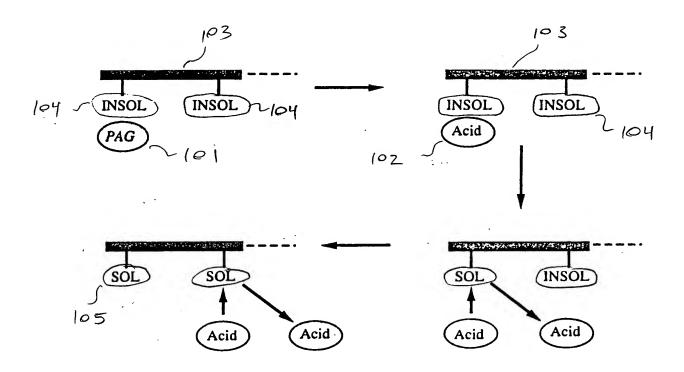
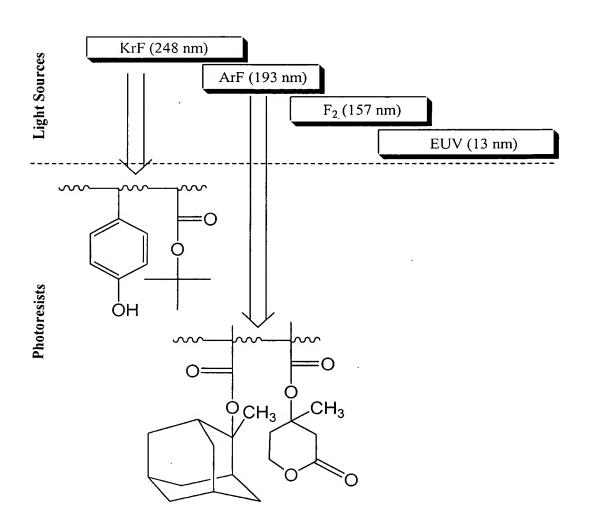


Fig. I

DIAMONDOID DERIVATIVES Inventor(s): Shenggao Liu et al. Attorney's Docket No: 005950-844

SHEET 2 of 26

FIG. 2

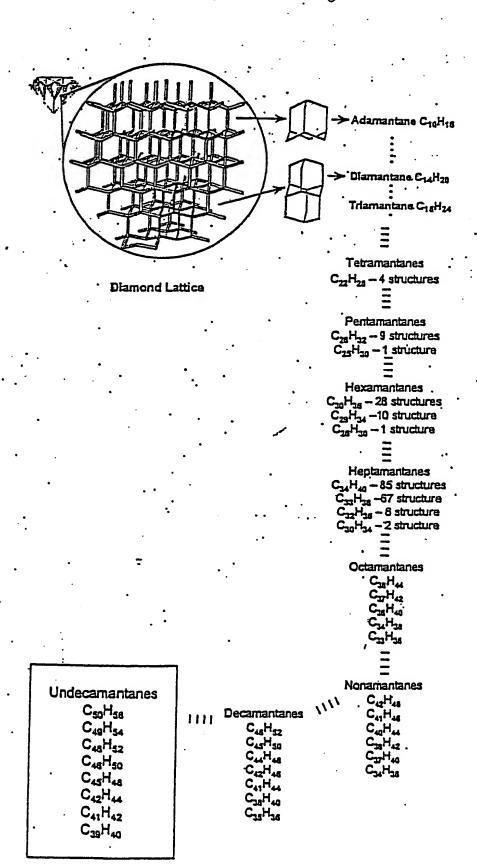


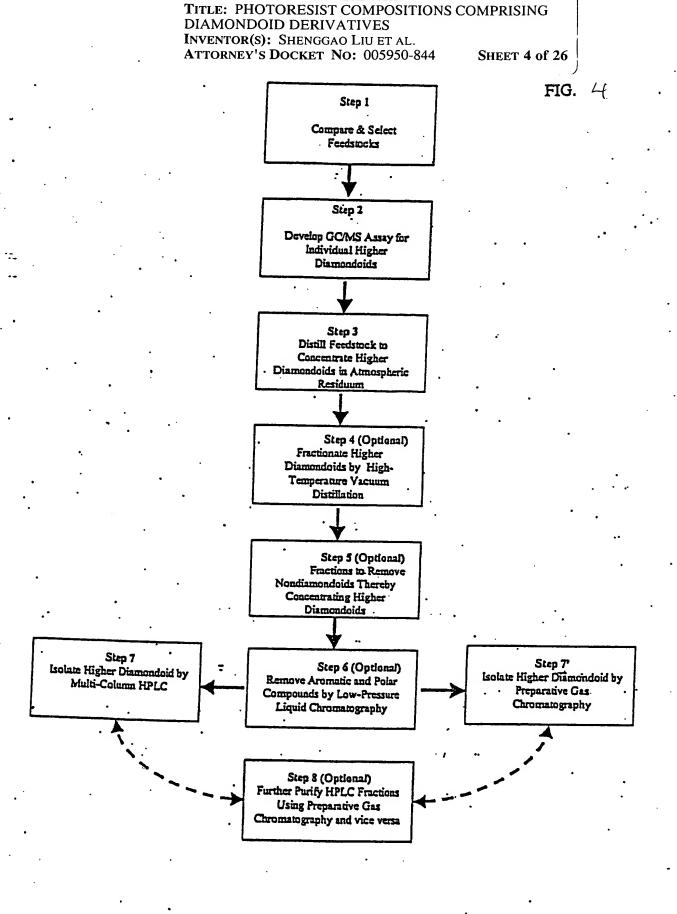
TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES Inventor(s): Shenggao Liu et al. Attorney's Docket No: 005950-844

SHEET 3 of 26

FIG. 3





TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES Inventor(s): Shenggao Liu et al. Attorney's Docket No: 005950-844

SHEET 5 of 26

FIG. 5A

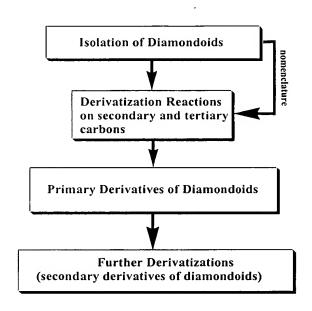
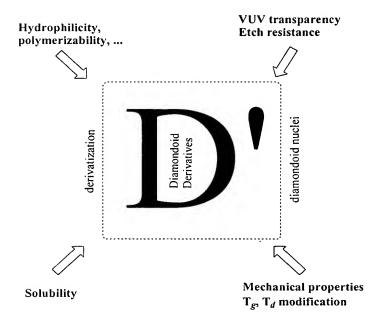


FIG. 5B



TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES Inventor(s): Shenggao Liu et al. Attorney's Docket No: 005950-844

SHEET 6 of 26

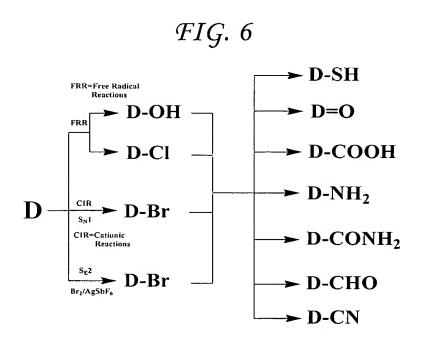
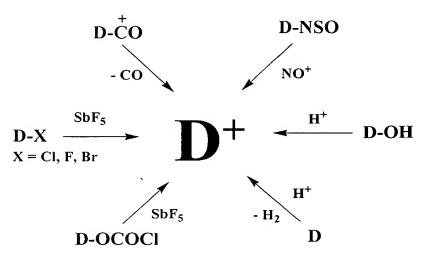


FIG. 7

Representative Ways of Generation of Diamondoid Cations (D⁺)



TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES
INVENTOR(S): SHENGGAO LIU ET AL.
ATTORNEY'S DOCKET NO: 005950-844

SHEET 7 of 26

FIG. 8

Representative S_N1 Reactions of Diamondoid Carbocations

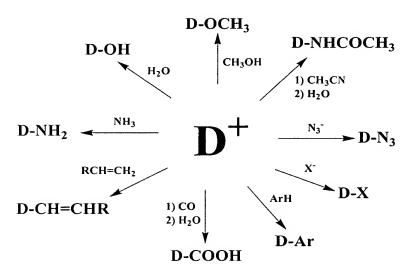
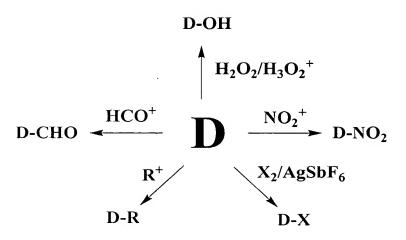


FIG. 9

Representative $S_E 2$ Reactions of Diamondoids



DIAMONDOID DERIVATIVES

INVENTOR(S): SHENCEAG I III ET A

INVENTOR(S): SHENGGAO LIU ET AL. ATTORNEY'S DOCKET NO: 005950-844

SHEET 8 of 26

FIG. 10

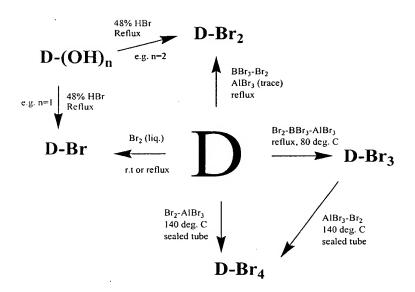
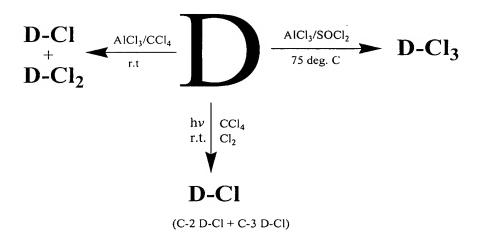


FIG. 11



TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES Inventor(s): Shenggao Liu et al. Attorney's Docket No: 005950-844

SHEET 9 of 26

FIG. 12

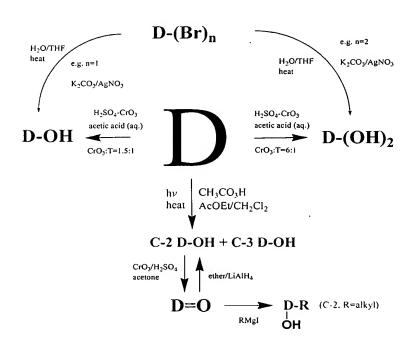
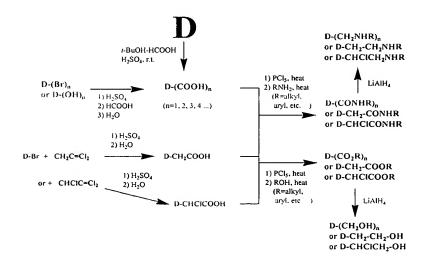


FIG. 13



TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES Inventor(s): Shenggao Liu et al. Attorney's Docket No: 005950-844

SHEET 10 of 26

FIG. 14

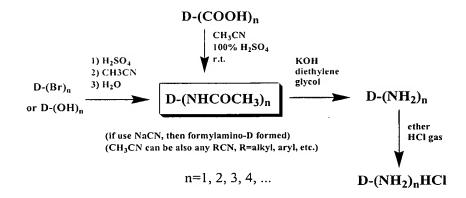
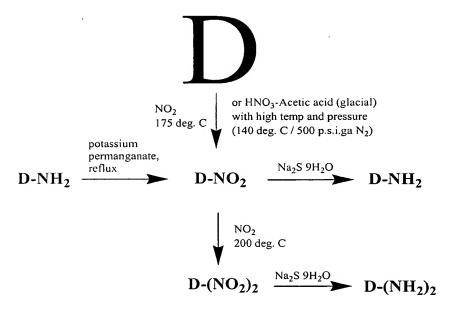


FIG. 15



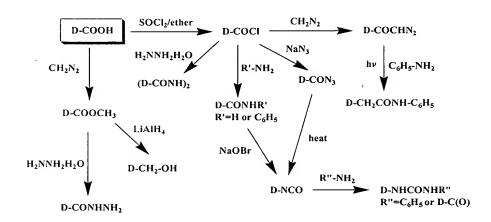
TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES INVENTOR(S): SHENGGAO LIU ET AL. ATTORNEY'S DOCKET NO: 005950-844

SHEET 11 of 26

FIG. 16

FIG. 17



TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES Inventor(s): Shenggao Liu et al. Attorney's Docket No: 005950-844

SHEET 12 of 26

FIG. 18

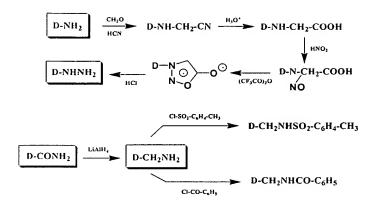


FIG. 19

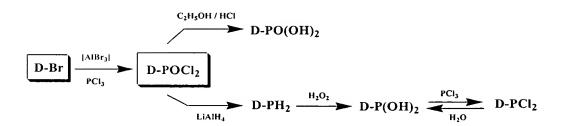
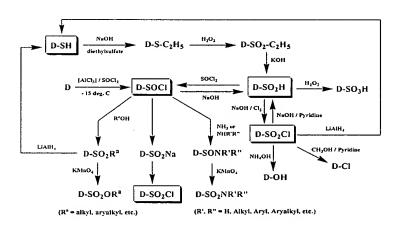


FIG. 20

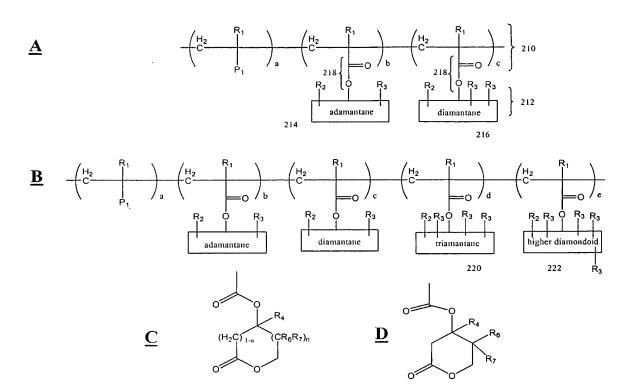


TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES INVENTOR(S): SHENGGAO LIU ET AL. ATTORNEY'S DOCKET NO: 005950-844

SHEET 13 of 26

FIG. 21

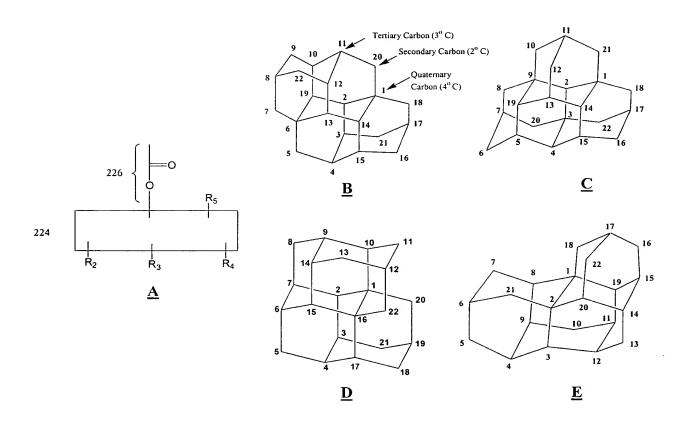


TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES Inventor(s): Shenggao Liu et al. Attorney's Docket No: 005950-844

SHEET 14 of 26

FIG. 22

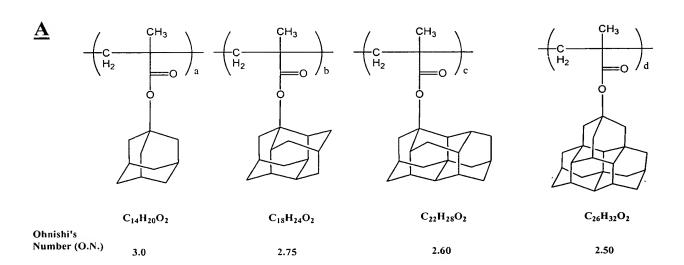


DIAMONDOID DERIVATIVES INVENTOR(S): SHENGGAO LIU ET AL. ATTORNEY'S DOCKET No: 005950-844

SHEET 15 of 26

3.20

FIG. 23



3.28

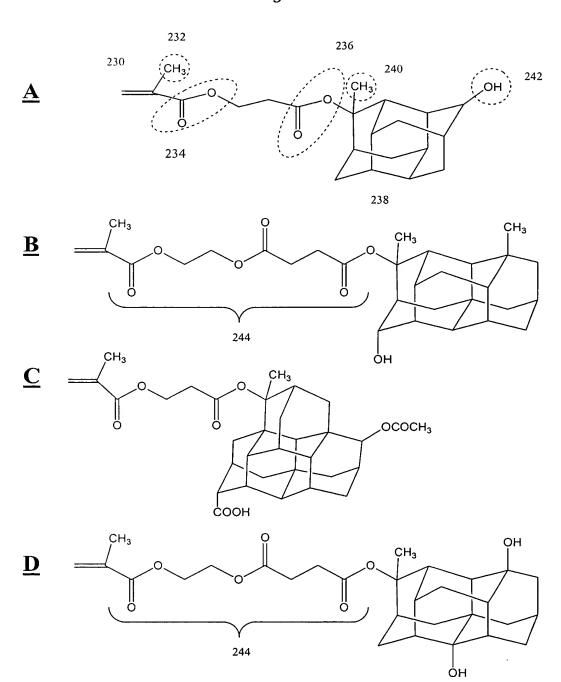
3.36

3.23

DIAMONDOID DERIVATIVES Inventor(s): Shenggao Liu et al. Attorney's Docket No: 005950-844

SHEET 16 of 26

FIG. 24



DIAMONDOID DERIVATIVES
INVENTOR(S): SHENGGAO LIU ET AL.
ATTORNEY'S DOCKET NO: 005950-844

SHEET 17 of 26

FIG. 25

$$\underbrace{A}_{R_{1}} = \underbrace{C}_{R_{1}} = \underbrace{C}_{R_{2}} = \underbrace{C}_{R_{3}} = \underbrace{C$$

$$\underline{\mathbf{B}}$$

Substrate~

APPLN. FILING DATE: HEREWITH TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES INVENTOR(S): SHENGGAO LIU ET AL. ATTORNEY'S DOCKET NO: 005950-844

SHEET 18 of 26

FIG. 26

$$H_2C = CH_3$$
 $H_2C = CH_3$
 $H_3C = CH_3$

TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES Inventor(s): Shenggao Liu et al. Attorney's Docket No: 005950-844

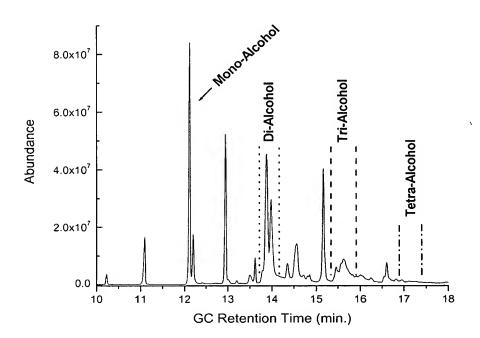
SHEET 19 of 26

FIG. 27

DIAMONDOID DERIVATIVES
INVENTOR(S): SHENGGAO LIU ET AL.
ATTORNEY'S DOCKET NO: 005950-844

SHEET 20 of 26

FIG. 28

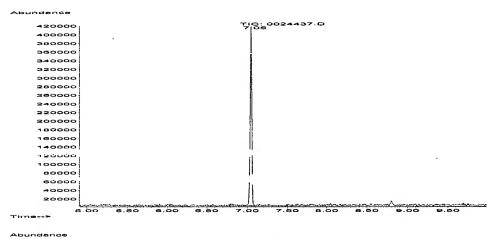


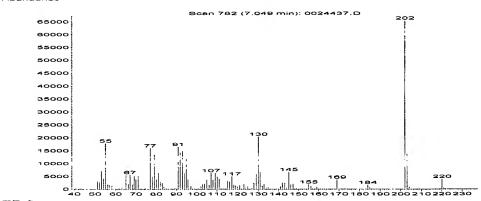
TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES Inventor(s): Shenggao Liu et al. Attorney's Docket No: 005950-844

SHEET 21 of 26

FIG. 29



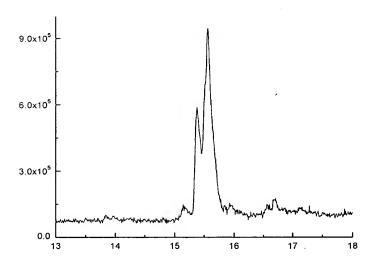


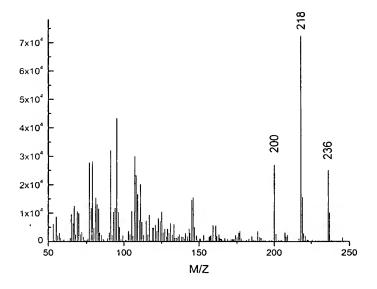
TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES Inventor(s): Shenggao Liu et al. Attorney's Docket No: 005950-844

SHEET 22 of 26

FIG. 30

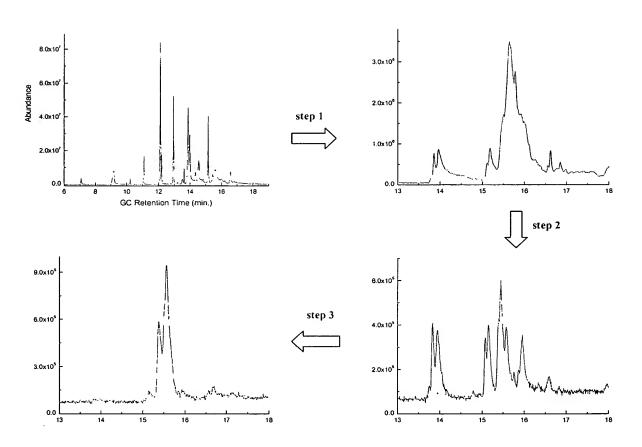




DIAMONDOID DERIVATIVES INVENTOR(S): SHENGGAO LIU ET AL. ATTORNEY'S DOCKET NO: 005950-844

SHEET 23 of 26

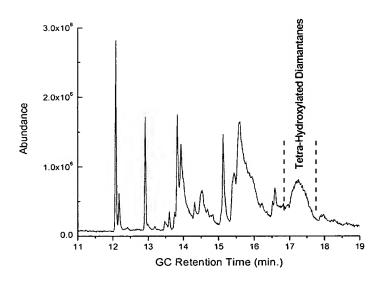
FIG. 31

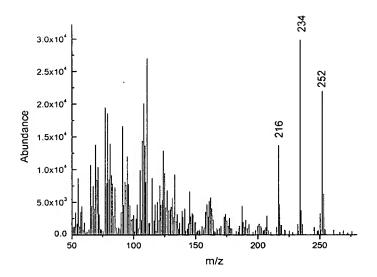


DIAMONDOID DERIVATIVES Inventor(s): Shenggao Liu et al. Attorney's Docket No: 005950-844

SHEET 24 of 26

FIG. 32





DIAMONDOID DERIVATIVES Inventor(s): Shenggao Liu et al. Attorney's Docket No: 005950-844

SHEET 25 of 26

FIG. 33A

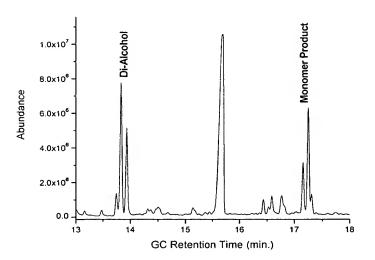
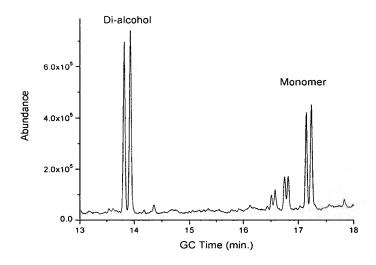


FIG. 33B

J



TITLE: PHOTORESIST COMPOSITIONS COMPRISING

DIAMONDOID DERIVATIVES
INVENTOR(S): SHENGGAO LIU ET AL.
ATTORNEY'S DOCKET NO: 005950-844

SHEET 26 of 26

FIG. 34

